



University of Hawai'i at Hilo

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**Minutes
Regular Meeting**

Mauna Kea Management Board
Wednesday, April 21, 2010

Kukahau`ula, Room 131
640 N. A'ohoku Place
Hilo, Hawaii 96720

Attending

MKMB: Chair Barry Taniguchi, 2nd Vice Chair/Secretary Ron Terry, John Cross, Lisa Hadway, Herring Kalua, and Christian Veillet

BOR: Dennis Hirota and Eric Martinson

Kahu Kū Mauna: Ed Stevens

OMKM: Stephanie Nagata and Dawn Pamarang

Others: Laura Aquino, Mary Begier, David Byrne, Sandra Dawson, Anil Dosaj, Suzanne Frayser, Paul Gillett, B. Hastings, Jim Hayes, Nelson Ho, Leslie Isemoto, Wallace Ishibashi, Jim Kennedy, Art Kimura, Ka'iu Kimura, Rene Kimura, Ron Koehler, Mike Maberry, Beverly Maragos, Myles Miyasato, Jon Miyata, Cynthia Nomura, Helen Rogers, Ian Sandison, Robert Saunders, Bill Stormont, Art Taniguchi, and Deborah Ward

I. CALL TO ORDER

Chair Taniguchi called the meeting of the Mauna Kea Management Board (MKMB) to order at 9:04 a.m.

II. APPROVAL OF MINUTES

Upon motion by Christian Veillet and seconded by Herring Kalua the minutes of the February 25, 2010 meeting of the MKMB were unanimously approved.

Chair Taniguchi requested moving item V, C.a. to item II. Upon motion by Ron Terry and seconded by Herring Kalua agenda item V, C.a. was moved.

Upon motion by Christian Veillet and seconded by Herring Kalua the minutes of the January 19, 2010 Executive Session were unanimously approved.

III. INTERIM DIRECTOR'S REPORT

A. Comprehensive Management Plan (CMP) Implementation Plan

Interim Director Nagata presented an overview of the CMP Implementation Plan to the University of Hawaii (UH) Board of Regents (BOR) at their March 18th meeting. This was an informational meeting only and included OMKM's focus and priorities over the immediate and short terms, the need to hire personnel, and an estimate of the cost to implement the CMP.

B. Board of Land and Natural Resources Presentation of Sub Plans

On March 25, 2010, Interim Director Nagata presented the four sub plans to the Board of Land and Natural Resources (BLNR) – Cultural Resources Management Plan (CRMP), Natural Resources Management Plan (NRMP), Public Access Plan (PAP), and Decommissioning Plan (DP).

EXHIBIT A-102

Sam Lemmo, administrator for the Office of Conservation and Coastal Lands of the Department of Land and Natural Resources (DLNR) presented his report. He reported that UH has complied with the requirements of the conditions placed on the approval of the CMP. He stated that the plans are a starting point and being that they are adaptive they will be modified as conditions change. DLNR staff recommended approval of the plans.

The members of the BLNR expressed concern that it would take considerable amount of time to do rule making. The BLNR unanimously approved all four sub plans with the condition that at the second annual report to the BLNR UH is to show demonstrated progress in the development of administrative rules. In addition the BLNR approved the project review flowcharts and accepted the BOR's delegation of the CMP implementation to UH Hilo, OMKM and MKMB.

C. Board of Land and Natural Resources Annual Report

On April 8, 2010 OMKM presented, as required by the BLNR when they approved the CMP, in writing and in person the status of the development of the four sub plans and development of the CMP management actions. The report included a summary of the management actions that have been completed, those that are currently being implemented, and a summary of the CMP implementation priorities that will incorporate many of the remaining CMP actions.

D. Mauna Kea Observatories Support Services (MKSS)

Ron Koehler will be retiring as General Manger of the MKSS. His last day is June 1st. UH has begun its recruitment process. Mr. Koehler has been with MKSS since 1992.

IV. KAHU KŪ MAUNA COUNCIL (KKMC)

No report.

V. OLD BUSINESS

A. Thirty-Meter Telescope (TMT) Design Review

Interim Director Nagata gave a summary of the design modifications that were discussed at the April 5th design review Phase 3 (design development) meeting and presented an overview of the proposed grading, site layout, and proposed areas of construction and operations activities.

Modifications to the design incorporated suggestions from the design review committee including creating a more natural look to the graded slopes and fill areas, addition of landscaping features in front of the summit facilities, addition of guardrails, providing adequate work areas for summit staff, and providing adequate pubic parking.

TMT reduced the footprint of the summit support building by consolidating functions and exercising efficient use of space. The end result is the replacement of the original designed multi-story with a one story building. TMT has designed the dome to minimally enclose the telescope with only a 20" clearance between the telescope and dome wall. The Calotte design and exterior dome aluminum color helps to minimize visibility. A re-evaluation of their energy requirements indicated reduced telescope cooling loads requiring smaller chillers. The emergency generator was downsized resulting in the need for a smaller diesel storage tank.

TMT's was concerned that the venting of warm air generated from mechanical and electrical equipment close to the building would create a heat plume that could negatively affect the seeing capacity of the telescope. As a precaution, they added a tunnel that would vent the warm air further away from the dome. A benefit to this approach is a reduction in noise at the building site. TMT is also proposing to install a weather station tower similar to the one between the Canada-France-Hawaii Telescope and Gemini Observatory. This weather tower will provide real time weather data that will help streamline operations.

TMT will be using materials and colors on the exterior of the support building and fixed enclosure that will help to blend in with the surroundings, including lava rock veneer walls. They also plan to install acoustical louvers to help reduce noise.

The final path of the access road to the TMT site has not been determined, but there are two options remaining from the original three that was proposed. If Option 3 is used, the design group suggested creating a more natural look to the slope of the road so that the road blends into rather than look like a cut into the slope. If Option 2 is

selected, an additional option (2A, 2B, or 2C) will be needed to address concerns raised by the Smithsonian Submillimeter Array (SMA). Of particular concern to SMA is the increase in the slope of the Option 2 road resulting from improvements that would be made by TMT. The result would be a slope that is too steep for their antennae transporter to use. Option 2A would be nearly adjacent to the existing portion of the Option 2 road and would require some form of a retaining wall; Option 2B would be a short leg between two SMA antennae roads and parallel to the Option 2A. Option 2C would be two connector roads between antennae pads. Options 2A, 2B, and 2C would allow SMA to access their antennas and bypass the steeper Option 2 road.

Debbie Ward had a question about containment of fluids and solids. The public has addressed concerns for years about sewage on the mountain; aluminizing, mercury and other spills. She asked about the storage of diesel fuel that may be subject to earthquake hazards.

Interim Director Nagata replied these issues would be discussed in TMT's environmental impact statement presentation. She added as part of TMT's design they will have a closed septic system and all waste water will be transported off the mountain.

B. Thirty-Meter Telescope (TMT) Final Environmental Impact Statement (FEIS)

Jim Hayes, consultant for TMT, gave an overview of the FEIS including the purpose and Hawaii state regulatory requirements related to the development of an EIS. He also discussed that a Federal EIS was not prepared because the National Environmental Policy Act (NEPA) had not been triggered. In addition no federal agency has committed to the project.

Mr. Hayes described some of the major refinements that were made since the Draft EIS, including the downsizing of the support building; elimination of the access road Option 1; the elimination of a satellite office in Waimea; refinements based on the CMP and sub plans; and refinements and expansion of mitigation measures based on inputs received, in particular those relating to cultural resources.

Potential impacts included a disturbance of about 0.2 acres of wēkiu bug habitat representing a small percentage of bug habitat. Mr. Hayes also mentioned that there are no historic properties, unique habitats or geologic features at or near the TMT site. A small portion of the access road will impact the base of the Pu'u Hau Oki. There are some potential land use related impacts such as visual impacts resulting from the height of the dome, generation of domestic and solid waste, and noise and dust resulting from vehicles traversing the road. Potential beneficial impacts include the generation of about 140 full time positions to support operations, as well as the support of construction jobs over the eight year construction period.

Project impacts were evaluated against the 13 significance criteria listed under Chapter 343. Impacts were also evaluated based on existing conditions including the presence of existing observatories and roads in the summit region and the visibility of existing observatories from other parts of the island. Based on existing conditions impacts of the project were not evaluated to be significant. A number of substantial, significant and adverse cumulative impacts exist due to past and present actions, but the project's foreseeable actions were determined to add a limited increment to the cumulative impact and would not result in a significant change in the level of cumulative impact.

Mr. Hayes described mitigation measure relating to cultural and biological resources including, for example, cultural and natural resources training programs; cultural, archaeological and arthropod monitoring during construction; a zero discharge waste system; and wēkiu bug habitat restoration study. Construction area mitigation includes a ride sharing program; fencing off adjacent areas to avoid disturbance; and controls to minimize dust, noise and fire. The project's design to minimize the size of the dome and aluminum-like finish are mitigation measures related to the impact on visual and aesthetic resources. Additional mitigation measures included a \$1 million community benefits package for a locally chosen and managed education programs; partnering with UH Hilo, Hawaii Community College and the Department of Education to train today's students for future TMT careers; and as much as possible fill TMT operations positions locally.

Public Comments

Ms. Ward, a member of the Sierra Club and co-chair of the Mauna Kea issues committee at the Chapter Level, stated the EIS is a State EIS and not a Federal EIS, even though some federal funds have already been expended,

but a federal EIS has not been triggered. She asked what would trigger a federal EIS and who determines the triggering process?

She also stated that the draft EIS draft did not include the sub plans, which are now part of the CMP that was approved by the BLNR, so they were not available for public comment during the draft EIS process. The entire CMP is still in litigation at the Intermediate Court of Appeals. The data gaps according to Ms. Ward that are identified in the NRMP preclude decisions on future development until those data gaps are filled. There is still a lack of information on the flora, the fauna, and hydrology on the summit. She also stated the draft EIS did not include any discussion of the Decommissioning Plan that also discusses future development.

Mary Begier, speaking as the president of the Hawaii Island Chamber of Commerce (HICC), stated HICC started reviewing the EIS on Monday afternoon. The Executive Summary contains a lot of information. Although she was not prepared to comment on it today, she looks forward to continuing to learn. She is asking the MKMB to move forward. She believes the TMT and the MKMB have demonstrated the integrity that is required for this project to be a success, not only a financial success, but for our community and our citizens.

Wallace Ishibashi, business agent for the International Longshore and Warehouse Union (ILWU) and chairman of the Big Island Labor Alliance representing all the labor unions on the Island, stated their support of this project. He commends this Board for taking the time and conducting the process fairly and with much aloha and respect for the Hawaiian community. He also recognized the Board for taking the time and having the patience to recognize the concerns and complexity of the Hawaiian culture and the Hawaiian needs and concerns. Although he is here for jobs, it is not about jobs. It is about dignity and bringing love into the home. We cannot solve all the social problems in our community, but projects like this make a big difference in getting the workforce working. For every employee hired to work don't forget the workforce behind the individual - the wife that has to get up early to pack their lunch, the children who will step on the dad's back for the pain that he suffers when he is working on a project. It is also about those who provide dignity at work. This is what brings our community to a higher standard of love and understanding, to alleviate the stress in the home, which we are experiencing heavily in the labor movement. It is about building trust and understanding between labor and management. We went together hand in hand to move this project along. Ultimately it is for the betterment of the community.

Leslie Isemoto, first vice-president of the Hawai'i Island Contractors Association which represents about 137-member companies of contractors and associate members in the construction industry. When they first heard about the TMT project he personally met with TMT to talk about the project. He brought them to their Board of Directors. Since that time, their Board has sincerely and enthusiastically supported this project one hundred percent. Looking at some of the numbers provided 140 jobs on the operation side and support for our community on the retail side. Construction jobs are desperately needed. The longevity of the TMT will provide a much needed boost to the economy. We are here to support TMT and are looking forward to getting the final EIS approved.

Myles Miyasato, representing the Operators Union, spoke in support of the EIS and on the process. TMT held a number of community meetings and provided a lot of visual material and information. They gave a short presentation followed by questions and answers. Those who were not comfortable speaking publicly could submit written comments on comment sheets provided. TMT addressed all the questions, heard all the concerns; and the meetings were transparent and open. The majority of the people at the meetings spoke in support. Even those who had concerns were not against the project. This is the opportunity to have the most advanced telescope on the Big Island. From what he has seen of the process it was done in good faith and according to the law. He asked the Board's support of the EIS approval.

Robert Saunders stated he really appreciated the volunteer effort of the board including the many hours even though they do not receive any compensation for their time. He too volunteers in the community serving on the Hawaii Island Economic Development Board (HIEDB). They started an ad hoc committee to work with TMT when they first came to our community to see if they could find a path that would lead them to a project that would achieve their scientific endeavors and benefit the community. He believes they have reached that. A concrete example of that is the Hawaii Island New Knowledge (THINK) Fund. This will have a tremendous impact on our community. HIEDB is working with TMT to establish the framework and governance that will guide this education fund. It is envisioned that the THINK Fund will foster excellence and learning for all students on Hawaii Island. THINK will serve as a focal point for attracting, gathering and redistributing private

and public sector resources in support of teachers and the children who are this community's future. THINK will center on educational initiatives for residents and students on this island, and this island only. TMT will provide one million dollars annually to the THINK Fund over the lifetime of the lease. This kind of commitment will have a profound long-term positive impact on our island and will truly make a difference. Over the last year he has attended many of TMT's pre-scoping as well as draft EIS public meetings, and support for this education fund has been overwhelming. He asked that we provide a timely and positive recommendation for the project EIS.

Jim Kennedy spoke as a member of the County of Hawaii Workforce Investment Board and also a retired manager from Gemini. In that role he discovered it was difficult despite their best efforts to fill a lot of positions with local people, which was his preference. It is very expensive bringing people over from the mainland. The County's Workforce Development Investment Board in cooperation with the directors of all of the observatories including the TMT want to do an analysis to try to understand how many jobs there are in the various disciplines, and what kind of educational preparation is necessary. They would like to work with local educational resources develop programs and seek funds to support the development of programs in the community that will give kids and adults opportunities for jobs at the observatories and TMT. They are delighted to have TMT's participation.

Ed Stevens clarified, for the record that the summit of Mauna Kea has three peaks – Puu Wekiu, the actual summit; Puu Kea, the ridge on which Gemini and UH are located; and Puu Hau Oki, where Subaru and Keck are located. Access road Option 3 cuts into the side of Puu Hau Oki. This may seem trivial, but it is important to him to have accuracy when referencing the mountain. The three cinder cones comprise Kūkahauūla.

C. Executive Session

Chair Taniguchi asked for a motion to move into executive session to discuss issues pertaining to the Board's powers, duties, privileges, immunities, and liabilities pursuant to HRS §92-5(a)(4). It was moved by Ron Terry and seconded by Herring Kalua to enter into executive session. Upon unanimous approval, the executive session commenced at 10:40 a.m.

Executive session concluded at 11:50 a.m. and after a five minute break, the Board returned to public session.

D. Thirty-Meter Telescope (TMT) Final Environmental Impact Statement (FEIS)

Before moving on with the action item, Chair Taniguchi asked Jim Hayes to respond to Ms. Ward's earlier questions and concerns.

Mr. Hayes explained that the determination whether NEPA is triggered is made by the federal agency. It cannot be made by TMT or by the State. In the case of TMT, the National Science Foundation (NSF) did not provide a significant amount of funding to TMT and it was not used for purposes which would have an effect on the environment.

A lot of work has been done on Mauna Kea some dating back to 1982 relating to wēkiu bugs and other studies dating back even earlier. The TMT project looked at the entire 36-acre Area E plus a buffer zone. Their scientists, including lichen specialists, and geologists surveyed the access way corridor and the batch plant staging area. Some of this was not done just for observatories, but for general scientific purposes and other uses of the mountain. Although there are data gaps there are numerous conceptual ideas and published papers, for example, the hydrologic cycle on the mountain. Data has been collected that characterize the impacts of this project and they have been documented and disclosed in the EIS. It is his understanding that the implementation of the CMP by OMKM will continue to fill in data gaps.

Mr. Hayes indicated the diesel fuel tank has been reduced from a 5,000 gallon tank to a 2,000 gallon tank. The storage tank will meet regulatory specifications such as a double containment system including the pipes, and an alarm system. There are best management practices for managing diesel storage.

The design of the support building contains drains into which all liquids discharged from various processes would drain into certain tanks. These tanks are also protected and will be pumped out and treated appropriately.

Mr. Stevens asked if TMT had a report on whether the wēkiu bug has propagated or died off in the small area where the bugs were found on access road Option 3. Mr. Hayes stated no research has been done since their earlier

survey. In the area along the access way Option 3 on the flank of Pu'u Hau Oki, a sampling done in August 2008 did not turn up bugs in the area, but in a follow-up survey in 2009 they found bugs.

Ron Terry gave a short review of his comments about the FEIS. He felt the draft EIS was adequate, but he had some issues with it and pointed out areas in his comment letter where the draft could be improved. He saw improvements in the FEIS. Having reviewed the comments letters and changes in the FEIS he found them mostly positive. There was better disclosure and better mitigation measures. He cited areas that were added that was lacking in the draft, such as public services and facilities. The FEIS looked at the entire historic district and considered its effects. It fleshed out the community benefits package and workforce pipeline; recognized OMKM's concern about the difficulty with wēkiu bug habitat restoration; included critical information from the four sub plans; and provided photos of close up views. It appears that some of concerns raised are based on past history perhaps based on misinformation or by those who were uninformed due to lack of understanding or sensitivity of the environment. The document goes into much detail on mitigation. He does not agree with everything in the FEIS and will continue to assert his points as the project evolves.

Action

It was moved by Ron Terry and seconded by Herring Kalua to recommend to the chancellor to approve and sign the TMT final EIS when it is finalized. This recommendation shall be subject to the qualifications as reflected in the discussion of the minutes of this meeting that follow.

Discussion

Dr. Terry stated that the MKMB is not like other boards, it is strictly advisory. In instances where other boards are asked to give a recommendation it is provided with more power, authority and material that is provided to us. MKMB was not given a staff report that tells the board members how to evaluate the EIS. The members of the MKMB are not attorneys, and with the exception of himself and Lisa Hadway, are not environmental scientists, thus making it difficult for the MKMB. The MKMB's recommendation must be taken in the spirit of not having adequate resources. The Chancellor needs to value the recommendation of the MKMB as that of a lay group that had only one week to study the EIS. The MKMB is offering one perspective among many and needs to take into account her own staff's and attorney's recommendations. It is strongly advised that the Chancellor review the public comments in the EIS for they are very instructive.

MKMB is the voice of the public but can only convey, understand and distill so much. He also pointed out that the MKMB was given a document that was not 100 percent complete and the document was a pre-final version and MKMB will need to see the final changes. MKMB understands that the EIS is nearly complete. It still needs to be cleaned up and responses to comments finalized. He anticipates there will be no substantive changes that will change the character of the recommendation that the MKMB might make. He would like to see changes that are explicitly identified and shown where the changes were made provided to all MKMB members.

Board members were all in favor with no one opposing.

VI. ANNOUNCEMENTS

There were no announcements from the public.

VII. NEXT MEETING

The next meeting is scheduled for Wednesday, May 19, 2010.

VIII. ADJOURNMENT

There being no further business, Chair Taniguchi adjourned the meeting at 12:12 p.m.

Respectfully submitted:

Signed by Dr. Ron Terry
Dr. Ron Terry, Secretary, MKMB

May 19, 2010
Date